

Memorandum

Flex your power!

Be energy efficient!

To: BARTON NEWTON
State Bridge Engineer
Deputy Division Chief

Date: May 15, 2013

From: THOMAS A. OSTROM *T.A.O.*
Office Chief
Office of Earthquake Engineering, Analysis and Research
Structure Policy and Innovation
Division of Engineering Services

Subject: Seismic Design Criteria Version 1.7

This release of the Seismic Design Criteria (SDC) supersedes the provisions of SDC Version 1.6. SDC Version 1.7 incorporates technical revisions, clarifications, new and additional design provisions as well as editorial enhancements to SDC Version 1.6.

The main features of SDC Version 1.7 are:

- Addition of a new subsection on Scour, Liquefaction, and Lateral Spreading Considerations
- Additional design provisions made to subsections such as Column Key Design, Horizontal Ground Motion, Analytical Plastic Hinge Length, Hinges, and Abutment Shear Key Reinforcement
- Revisions and clarifications made to subsections such as Footing Design, Effective Superstructure Width, Joint Description, Minimum Development Length of Column Longitudinal Bars into Cap Beams, and Flexure and Shear Demand/Capacity Requirements for Type II Shafts
- Implementation of a new Equation numbering system based on subsection numbering
- Implementation of a new Figure and Table numbering system based on subsection numbering

SDC Version 1.7 was generated according to the following procedure:

- 1- Teams were formed from General Earthquake Committee (GEQC) to develop or revise various articles.
- 2- The articles were discussed, revised and updated as necessary by GEQC members (i.e., Quality Control)
- 3- The approved articles from GEQC were reviewed, revised and updated as necessary by the Executive Earthquake Committee (i.e., Quality Assurance).
- 4- The Seismic Advisory Board (SAB) reviewed and made comments on the proposed SDC Version 1.7 document (i.e., Independent Quality Assurance - IQA).
- 5- Comments from SAB were implemented in the revised SDC Version 1.7 document, with the exception of those requiring lengthy investigations, which will be addressed in the next release of the SDC.
- 6- Additional IQA is performed by SP&I per procedure established which includes this memo and the final review of the document.

The above changes, clarifications, and design provisions are essential for the design of bridges as new information and research become available to Caltrans.

Questions regarding the technical content of the SDC should be directed to Mark Mahan at (916) 227-8404 or mark_mahan@dot.ca.gov.

BARTON NEWTON – SP&I

May 15, 2013

Page 2

Attachments

c: w/o Attachments

Mark Mahan-DES/SP&I/OEEAR

Sue Hida-DES/SP&I/OSBES

Majid Madani-DES/SD/Office West

Abbas Abghari, DES/GS/South 2

Kevin Keady, SM&I

Lam Nguyen, DES/PPRM/OSFP